FIRE RATED PERFORATED DIFFUSERS

The fire rated diffusers in this series are the most popular choices of Nailor's 4300 series perforated diffusers. Models included are the adjustable pattern controller design for ultimate performance flexibility. Available in both supply and return air styles with a choice of a flush or drop face.

Supply Air Adjustable Pattern Deflectors – Round Neck

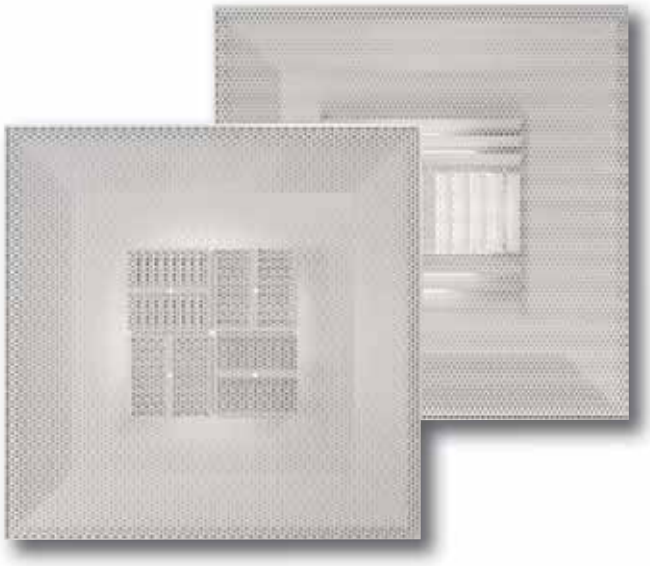
Flush Face	Models 4070, 4080	**Page E31**
Drop Face	Models 4075, 4085	**Page E31**
Surface Mount	Model 4070 Type S (ULC only)	**Page E34**

Return Air – Round Neck

Flush Face	Models 4070R, 4080R	**Page E31**
Drop Face	Models 4075R, 4085R	**Page E31**
Surface Mount	Models 4070R Type S (ULC only)	**Page E34**

Supply Air Curved Blade Pattern Controllers – Round Neck

Flush Face	Models 4070CB, 4080CB	**Page E37**
Drop Face	Models 4075CB, 4085CB	**Page E37**



Models 4080, 4080CB

Model 7500FRD

FIRE RATED MODULAR CORE DIFFUSERS

Nailor 7500 Series Modular Core Diffusers feature four individual spring-loaded 'modular' pattern controllers mounted in the neck. They can be adjusted before or after installation, to provide a 1, 2, 3 or 4-way discharge pattern. The diffuser maintains a horizontal ceiling pattern from maximum to minimum flow.

Square Neck –
Model 7500FRD **Page E40**

Round Neck –
Model 7505FRD **Page E40**

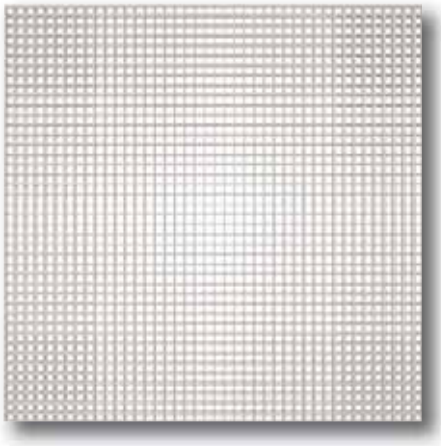
FIRE RATED DUCTLESS RETURN GRILLES

Model Series 4100 Ductless Return Grilles have been designed to compliment the Nailor range of fire rated supply diffusers. The grilles have been tested and classified for use without the requirement of duct work or supplementary support, they simply lay in place. The grilles are available in three styles, a perforated face, an eggcrate face or an open face model that can accommodate a grille by others.

Perforated Face –
Models 4111, 4112, 4113 **Page E44**

Eggcrate Face –
Models 4114, 4115, 4116 **Page E44**

Open Face (grille by others) –
Models 4117, 4118, 4119 **Page E44**



Model 4116

FIRE RATED PERFORATED CEILING DIFFUSERS

- FACE MOUNTED DEFLECTORS
- 1, 2, 3 OR 4-WAY ADJUSTABLE DISCHARGE PATTERN
- ROUND NECK
- 3 HOUR RATING
- LAY-IN

CLASSIFIED UL

CATEGORY BZZU

CLASSIFIED C UL

CATEGORY BZGUC

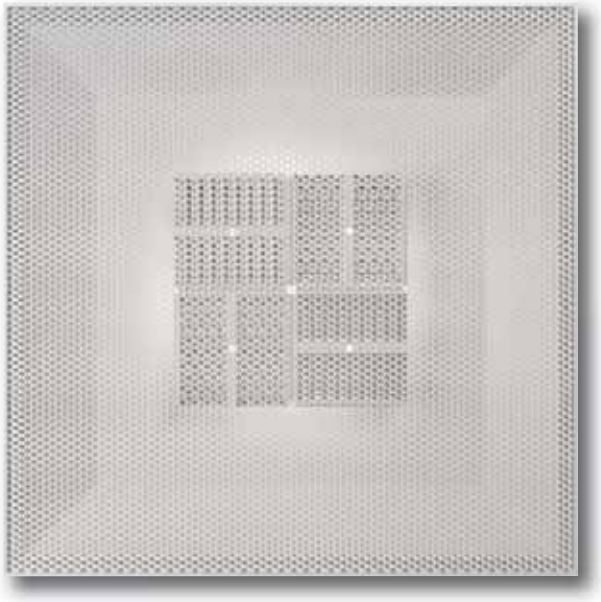
AIR DIFFUSER FIRE RATED LISTING STATE OF CALIFORNIA STATE FIRE MARSHAL SERVICE LISTING NO. 3161-0935:0104

Supply Models:

4070, 4080	**Flush Face**
4075, 4085	**Drop Face**

Return Models:

4070R, 4080R	**Flush Face**
4075R, 4085R	**Drop Face**



Model 4080

Model Series 4070 and 4080 are UL/ULC Classified fire rated Ceiling Diffuser/Air Terminal Unit assemblies listed in Underwriters Laboratories Fire Resistance Directory. This design meets UL time-vs-temperature test criteria and NFPA 90A requirements.

All diffusers are classified for use in UL/ULC restrained or unrestrained floor/ceiling and or roof/ceiling assemblies which incorporate an exposed grid suspended ceiling (lay-in T-Bar) with up to a 3 hour rating. For details of fire rated assemblies, see the current UL or ULC Fire Resistance Directory.

Fire Rated Perforated Ceiling Diffusers have been designed to provide the unobtrusive appearance required for architectural excellence and the high engineering performance required for use in heating and cooling applications. They have excellent performance in variable air volume systems and provide a tight horizontal discharge pattern without marking the ceiling.

STANDARD FEATURES:

- Tested in accordance with ANSI/UL Standard 263, "Fire Tests of Building Construction and Materials" and CAN/ULC Standard S101 "Fire Endurance Tests of Building Construction and Materials."
- Hinged removable face plate with quick-release spring latches.
- Discharge pattern can adjust to vertical or 1, 2, 3 or 4-way horizontal, before or after installation.
- Discharge pattern is adjusted by dropping the perforated face and rotating the pattern controllers.
- Round necks permit use of flexible duct.
- The fixed ceiling radiation damper is standard. An adjustable version for balancing is optional (see page E32).
- Dropping the perforated face gives access to this balancing feature.
- 212°F (100°C) fusible link is standard (165°F [74°C] is optional).
- Perforated face with 3/16" (5) diameter holes on staggered 1/4" (6) centers (51% free area).
- Return models have the same face and frame construction as the supply models to match appearance. The deflectors are omitted for return applications.
- All models must be installed in accordance with the installation instructions for UL/ULC Classification.
- Ductless returns are also available.

CONSTRUCTION MATERIAL:

- Corrosion-resistant steel.

FINISH OPTIONS:

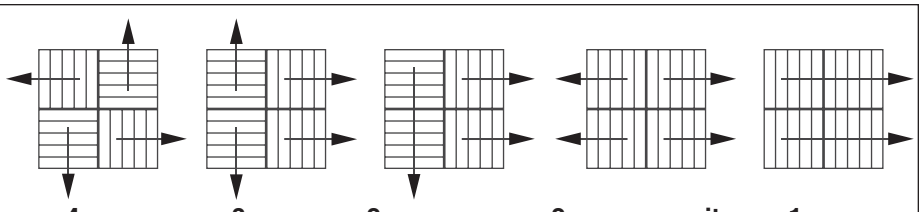
- AW Appliance White finish is standard.
- Other finishes are available.

PERFORMANCE DATA:

- See non-fire rated Model 4320 (flush face), Model 4325 (drop face), Model 4360 (flush face) and Model 4365 (drop face).

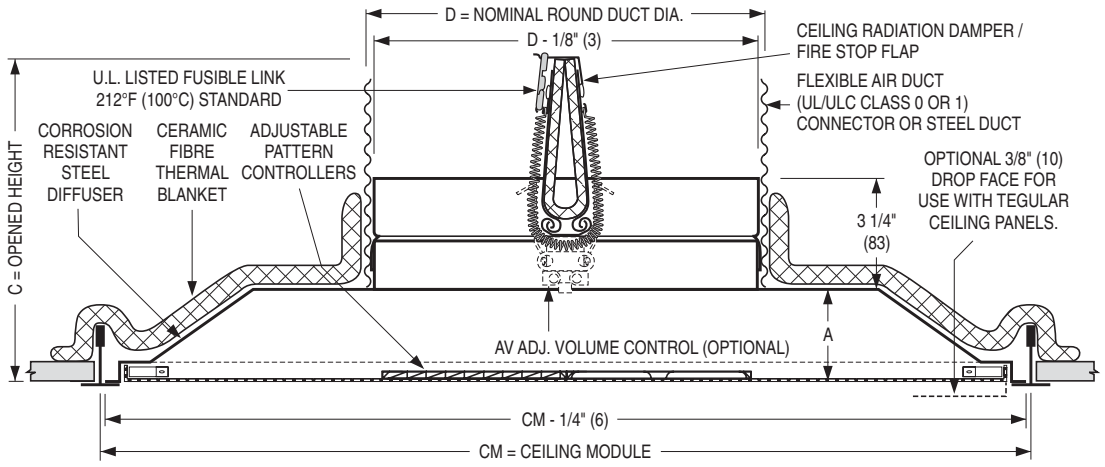
Available Air Patterns:

All diffusers are shipped with the standard 4-way pattern, but the air pattern can be simply field adjusted by lowering the hinged face and rotating the spring loaded pattern controllers.



DIMENSIONAL DATA:

MODELS 4070, 4075, 4080, 4085, 4070R, 4075R, 4080R AND 4085R



Type L Lay-in T-Bar Frame

E

FIRE RATED PRODUCTS

Available Sizes and Dimensional Data

	Imperial Modules						Metric Modules		
	Imperial Units (in.)			SI Units (mm)			SI Units (mm)		
Listed Neck Size	CM = 12 x 12			CM = 305 x 305			CM = 300 x 300		
	D	A	C	D	A	C	D	A	C
6	6	1 7/8	6 3/8	152	48	162	152	48	162
8	8		7 3/8	203		187	203		187
Listed Neck Size	CM = 24 x 24			CM = 610 x 610			CM = 600 x 600		
	D	A	C	D	A	C	D	A	C
6	6	2 3/8	6 7/8	152	60	175	152	60	175
8	8		7 7/8	203		200	203		200
10	10		8 7/8	254		225	254		225
12	12		9 7/8	305		251	305		251
14	14		10 7/8	356		276	356		276

Model Number Designation

Supply Models:

4070, Flush Face
4075, Drop Face
12 x 12 or 300 x 300
Type L Lay-in Frame

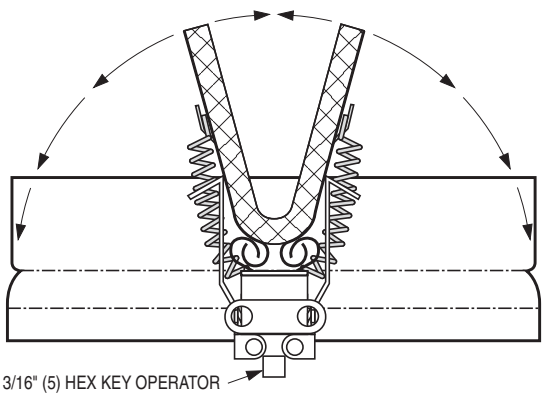
4080, Flush Face
4085, Drop Face
24 x 24 or 600 x 600
Type L Lay-in Frame

Return Models:

4070R, Flush Face
4075R, Drop Face
12 x 12 or 300 x 300
Type L Lay-in Frame

4080R, Flush Face
4085R, Drop Face
24 x 24 or 600 x 600
Type L Lay-in Frame

AV Adjustable Volume Control Option.
This UL Listed ceiling radiation damper control **(Model 0722A)** option allows the ceiling radiation damper to be used as a balancing damper for volume control.
The ceiling damper blades are adjusted with a hex key and perform like a butterfly damper.



HOW TO ORDER OR TO SPECIFY

FIRE RATED PERFORATED CEILING DIFFUSERS – ROUND NECK
MODELS 4070, 4080, 4075, 4085, 4070R, 4080R, 4075R, 4085R

EXAMPLE: 4070 - 06 - 12" x 12" - L - AW - 212 - AV

1. **Models**
   - 4070 12" x 12" or 300 mm x 300 mm, Flush Face - Supply
   - 4080 24" x 24" or 600 mm x 600 mm, Flush Face - Supply
   - 4075 12" x 12" or 300 mm x 300 mm, Drop Face - Supply
   - 4085 24" x 24" or 600 mm x 600 mm, Drop Face - Supply
   - 4070R 12" x 12" or 300 mm x 300 mm, Flush Face - Return
   - 4080R 24" x 24" or 600 mm x 600 mm, Flush Face - Return
   - 4075R 12" x 12" or 300 mm x 300 mm, Drop Face - Return
   - 4085R 24" x 24" or 600 mm x 600 mm, Drop Face - Return
2. **Neck Size**
   Imperial
   - 06 6" (152) Round
   - 08 8" (203) Round
   - 10 10" (254) Round
   - 12 12" (305) Round
   - 14 14" (356) Round

   Available on Models 4080, 4085, 4080R, 4085R
3. **Ceiling Module Size**
   Imperial
   - 12" x 12"
   - 24" x 24"

   Metric
   - 300 mm x 300 mm
   - 600 mm x 600 mm
4. **Frame Type**
   - L Lay-in T-Bar
5. **Finish**
   - AW Appliance White (default)
   - AL Aluminum
   - BA Appliance White Face - Black Back Pan
   - BK Black
   - BW British White
   - PC Prime Coat
   - SP Special Custom Color
6. **Fusible Link Temperature**
   - 212 212°F (100°C) (default)
   - 165 165°F (74°C)
7. **Volume Control**
   - — None (default)
   - AV Adjustable Volume Control

Note:

1. Consult individual model as to limitations of module and neck size combination.

SUGGESTED SPECIFICATION:

Furnish and install **Nailor Model** (select one or more) Supply – **4070, 4080 (Flush Face),** or **4075, 4085 (Drop Face)** or Return **– 4070R, 4080R (Flush Face)** or **4075R, 4085R (Drop Face) Round Neck Steel Fire Rated Perforated Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffusers shall be manufactured from corrosion-resistant steel and have a hinged removable face plate with quick-release spring latches. The discharge pattern can adjust to vertical or 1, 2, 3, or 4-way horizontal, before or after installation, by dropping the perforated face and rotating the pattern controllers. Return models have the same face and frame construction as the supply models to match appearance. The deflectors are omitted for return applications. Diffusers shall include a factory mounted ceiling damper and thermal blanket. (Optional: ceiling damper shall be supplied with AV adjustable volume control option for field balancing). The finish shall be AW Appliance White (optional finishes are available). Diffusers shall be UL/ULC Classified fire rated ceiling diffuser assemblies as listed in the UL/ULC Fire Resistance (Certifications) Directory. Diffusers shall be tested in accordance with UL Standard 263 (field assembled diffusers with ceiling dampers tested to UL Standard 555C are not acceptable) and meet all of the requirements of NFPA 90A. Diffusers shall be classified for use in restrained or unrestrained floor/ceiling and or roof/ceiling assemblies which incorporate an exposed grid suspended ceiling with up to a 3 hour rating.

FIRE RATED PERFORATED CEILING DIFFUSERS

- FACE MOUNTED DEFLECTORS
- 1, 2, 3 OR 4-WAY ADJUSTABLE DISCHARGE PATTERN
- ROUND NECK
- 3 HOUR RATING
- SURFACE MOUNT

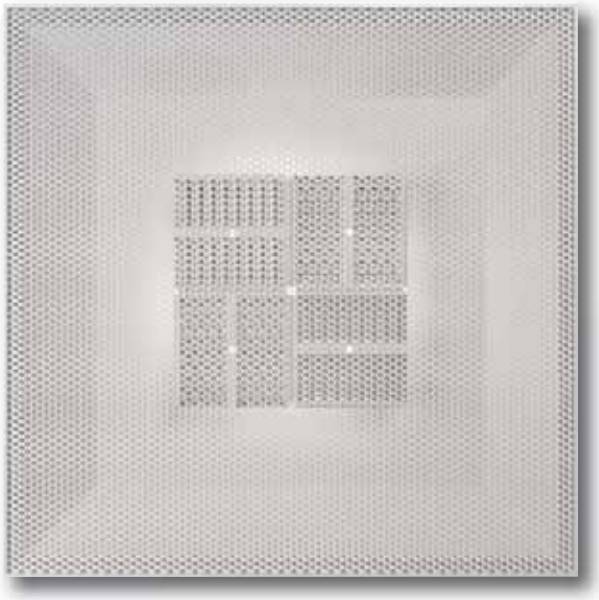
CLASSIFIED C UL
CATEGORY BZGUC

Supply Model:

4070 12 x 12 or 300 x 300 Type S Surface Mount

Return Model:

4070R 12 x 12 or 300 x 300 Type S Surface Mount



Model 4070

Classified by Underwriters' Laboratories of Canada (ULC) for use in ULC restrained or unrestrained floor/ceiling and or roof/ceiling assemblies which incorporate air ducts and a hard (gypsum board) ceiling membrane with up to a 3 hour rating. For details of fire rated assemblies, see the current ULC List of Equipment and Materials Vol. III Fire Resistant Ratings. The use of this product in fire rated ceilings with ceiling membrane protection and/or UL Classified assemblies in the U.S.A. requires local approval by the authority having jurisdiction.

The discharge pattern is 1, 2, 3, or 4-way horizontal and is adjusted by dropping the perforated face and rotating the pattern deflectors. Removable face has spring clips for easy access to the damper.

The return model is furnished without pattern controllers.

STANDARD FEATURES:

- Tested in accordance with CAN/ULC Standard S101 "Fire Endurance Tests of Building Construction and Materials."
- The fixed ceiling radiation damper is standard. An adjustable version for balancing is optional (see page E35).
- Non-standard temperature UL Listed fusible link (165°F [74°C]).

CONSTRUCTION MATERIAL:

- Corrosion-resistant steel diffuser.

FINISH OPTIONS:

- AW Appliance White finish is standard.
- Other finishes are available.

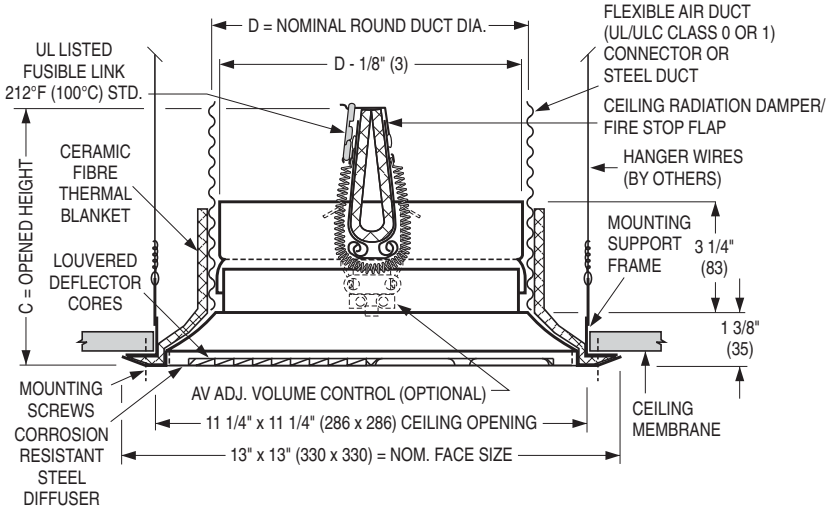
PERFORMANCE DATA:

- See non-fire rated Model 4320 and Model 4360.

DIMENSIONAL DATA:

MODELS 4070 AND 4070R

12 x 12 or 300 x 300 TYPE S SURFACE MOUNT MODULE FOR HARD CEILINGS



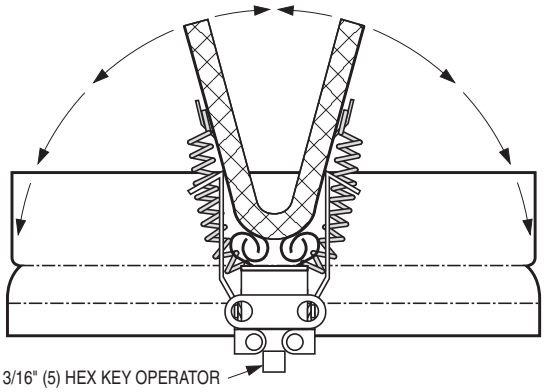
Type S Surface Mount

Available Sizes and Dimensional Data

Model 4070 - 12 x 12 or 300 x 300 module

Listed Neck Size	Imperial Modules				Metric Modules	
	Imperial Units (in.)		SI Units (mm)		SI Units (mm)	
	CM = 12 x 12		CM = 305 x 305		CM = 300 x 300	
	D	C	D	C	D	C
6	6	5 7/8	152	149	152	149
8	8	6 7/8	203	175	203	175

AV Adjustable Volume Control Option.
This UL Listed ceiling radiation damper control **(Model 0722A)** option allows the ceiling radiation damper to be used as a balancing damper for volume control.
The ceiling damper blades are adjusted with a hex key and perform like a butterfly damper.



HOW TO ORDER OR TO SPECIFY

FIRE RATED PERFORATED CEILING DIFFUSERS – ROUND NECK
MODELS 4070, 4070R

EXAMPLE: 4070 - 06 - 12" x 12" - S - AW - 212 - AV

1. **Models**
   - 4070 Supply Air
   - 4070R Return Air
2. **Neck Size**
   Imperial
   - 06 6" (152) Round
   - 08 8" (203) Round
3. **Ceiling Module Size**
   Imperial
   12" x 12"
   Metric
   300 mm x 300 mm
4. **Frame Type**
   - S Surface Mount
5. **Finish**
   - AW Appliance White (default)
   - AL Aluminum
   - BK Black
   - BW British White
   - PC Prime Coat
   - SP Special Custom Color
6. **Fusible Link Temperature**
   - 212 212°F (100°C) (default)
   - 165 165°F (74°C)
7. **Volume Control**
   - — None (default)
   - AV Adjustable Volume Control

SUGGESTED SPECIFICATION:

Furnish and install **Nailor Model** (select one or more) **4070 Type S** Surface Mount (Supply) or **4070R Type S** Surface Mount (Return) **Round Neck Steel Fire Rated Perforated Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall be manufactured from corrosion-resistant steel with a discharge pattern of 1, 2, 3, or 4-way horizontal and is adjusted by dropping the perforated face and rotating the pattern controllers. The return model is furnished without pattern controllers. Diffusers shall include a factory mounted ceiling damper and thermal blanket. (Optional: ceiling damper shall be supplied with AV adjustable volume control option for field balancing). The finish shall be AW Appliance White (optional finishes are available). Diffusers shall be ULC Classified fire rated ceiling diffuser assemblies as listed in the ULC Fire Resistance (Certifications) Directory. Diffusers shall be tested in accordance with CAN/ULC Standard S101 (field assembled diffusers with ceiling dampers tested to UL Standard 555C are not acceptable) and meet all of the requirements of NFPA 90A. Diffusers shall be classified for use in restrained or unrestrained floor/ceiling and or roof/ceiling assemblies which incorporate air ducts and a hard gypsum board ceiling membrane with up to a 3 hour rating. The use of this product in UL Classified Ceiling Assemblies requires approval from the local authority having jurisdiction.

FIRE RATED PERFORATED CURVED BLADE CEILING DIFFUSERS

- CURVED BLADE PATTERN CONTROLLERS
- 4-WAY ADJUSTABLE DISCHARGE PATTERN
- ROUND NECK
- 3 HOUR RATING
- LAY-IN

CATEGORY BZZU

CATEGORY BZGUC

AIR DIFFUSER FIRE RATED LISTING STATE OF CALIFORNIA STATE FIRE MARSHAL SERVICE LISTING NO. 3161-0935:0104

Supply Models:

4070CB, 4080CB Flush Face

4075CB, 4085CB Drop Face

Model 4080CB

Model Series 4070CB and 4080CB are UL/ULC Classified fire rated Ceiling Diffuser/Air Terminal Unit assemblies listed in Underwriters Laboratories Fire Resistance Directory. This design meets UL time-vs-temperature test criteria and NFPA 90A requirements.

All diffusers are classified for use in UL/ULC restrained or unrestrained floor/ceiling and or roof/ceiling assemblies which incorporate an exposed grid suspended ceiling (lay-in T-Bar) with up to a 3 hour rating. For details of fire rated assemblies, see the current UL or ULC Fire Resistance Directory.

Curved Blade Perforated Diffusers provide the unobtrusive, smooth appearance preferred by many architects with superior features and performance characteristics. Designed to maximize throw, this model features individually adjustable, friction pivoted curved blade deflectors mounted directly under the neck. They project a tight, uniform horizontal blanket of air over a wide range of air volumes and provide excellent performance in variable air volume systems.

These models feature a 4-way adjustable discharge pattern as standard. The deflector blades can be adjusted to control both the angle of discharge and hence throw from full horizontal to vertical in each direction and also damper the air volume. By closing off the deflectors in one or more directions, directional control can also be achieved. They are optionally available with a factory supplied 1, 2 or 3-way adjustable discharge pattern controller.

The 4075CB and 4085CB feature a dropped (extended) face panel that is available to compliment tegular tile ceiling systems, so that the panel remains flush with the ceiling line.

STANDARD FEATURES:

- Tested in accordance with ANSI/UL Standard 263, "Fire Tests of Building Construction and Materials" and CAN/ULC Standard S101 "Fire Endurance Tests of Building Construction and Materials."
- Hinged removable face plate with quick-release spring latches.
- Discharge pattern can be adjusted from horizontal to vertical, before or after installation.
- Discharge pattern is adjusted by dropping the perforated face and moving the curved blade deflectors.
- Round necks permit use of flexible duct.
- The fixed ceiling radiation damper is standard. An adjustable version for balancing is optional (see page E38).
- Dropping the perforated face gives access to this balancing feature.
- 212°F (100°C) fusible link is standard (165°F [74°C] is optional).
- Perforated face with 3/16" (5) diameter holes on staggered 1/4" (6) centers (51% free area).
- All models must be installed in accordance with the installation instructions for UL/ULC Classification.
- Ductless returns are also available.

CONSTRUCTION MATERIAL:

- Corrosion-resistant steel.

FINISH OPTIONS:

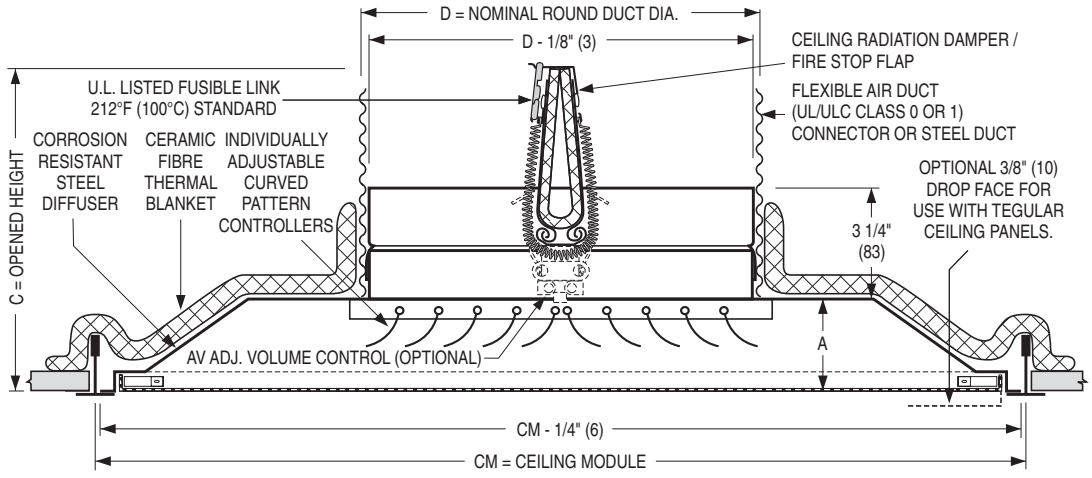
- AW Appliance White finish is standard.
- Other finishes are available.

PERFORMANCE DATA:

- See non-fire rated Models 4320CB and 4325CB.

DIMENSIONAL DATA:

MODELS 4070CB, 4075CB, 4080CB AND 4085CB



Type L Lay-in T-Bar Frame

Available Sizes and Dimensional Data

	Imperial Modules						Metric Modules		
	Imperial Units (in.)			SI Units (mm)			SI Units (mm)		
Listed Neck Size	CM = 12 x 12			CM = 305 x 305			CM = 300 x 300		
	D	A	C	D	A	C	D	A	C
6	6	1 7/8	6 3/8	152	48	162	152	48	162
8	8		7 3/8	203		187	203		187
Listed Neck Size	CM = 24 x 24			CM = 610 x 610			CM = 600 x 600		
	D	A	C	D	A	C	D	A	C
6	6	2 3/8	6 7/8	152	60	175	152	60	175
8	8		7 7/8	203		200	203		200
10	10		8 7/8	254		225	254		225
12	12		9 7/8	305		251	305		251
14	14		10 7/8	356		276	356		276

Model Number Designation

Supply Models:

4070CB, Flush Face

4075CB, Drop Face

12 x 12 or 300 x 300

Adjustable Curved Blades

Type L Lay-in Frame

4080CB, Flush Face

4085CB, Drop Face

24 x 24 or 600 x 600

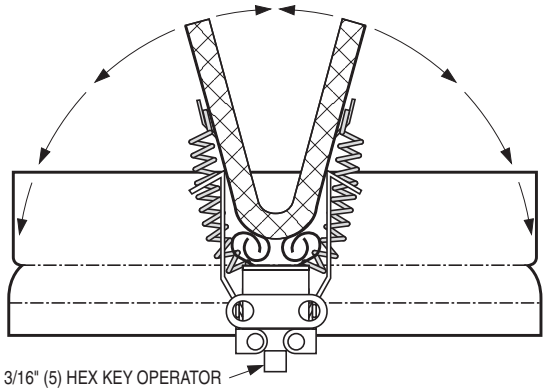
Adjustable Curved Blades

Type L Lay-in Frame

AV Adjustable Volume Control Option.

This UL Listed ceiling radiation damper control **(Model 0722A)** option allows the ceiling radiation damper to be used as a balancing damper for volume control.

The ceiling damper blades are adjusted with a hex key and perform like a butterfly damper.



HOW TO ORDER OR TO SPECIFY

FIRE RATED PERFORATED CEILING DIFFUSERS – ROUND NECK
MODELS 4070CB, 4080CB (FLUSH FACE) - 4075CB, 4085CB (DROP FACE)

EXAMPLE: 4070CB - 06 - 12" x 12" - L - AW - 212 - AV - B4

1. **Models**
   - 4070CB 12" x 12" or 300 mm x 300 mm, Flush Face
   - 4080CB 24" x 24" or 600 mm x 600 mm, Flush Face
   - 4075CB 12" x 12" or 300 mm x 300 mm, Drop Face
   - 4085CB 24" x 24" or 600 mm x 600 mm, Drop Face
2. **Neck Size**
   Imperial
   - 06 6" (152) Round
   - 08 8" (203) Round
   - 10 10" (254) Round
   - 12 12" (305) Round
   - 14 14" (356) Round

   *Available on Models 4080CB, 4085CB
3. **Ceiling Module Size**
   Imperial
   - 12" x 12"
   - 24" x 24"

   Metric
   - 300 mm x 300 mm
   - 600 mm x 600 mm
4. **Frame Type**
   - L Lay-in T-Bar
5. **Finish**
   - AW Appliance White (default)
   - AL Aluminum
   - BA Appliance White Face - Black Back Pan
   - BK Black
   - BW British White
   - PC Prime Coat
   - SP Special Custom Color
6. **Fusible Link Temperature**
   - 212 212°F (100°C) (default)
   - 165 165°F (74°C)
7. **Volume Control**
   - — None (default)
   - AV Adjustable Volume Control
8. **Blow Pattern**
   - B4 4-Way Blow (default)
   - B1 1-Way Blow
   - B2 2-Way Opposite Blow
   - B3 3-Way Blow
   - C2 2-Way Corner Blow

Note:

1. Consult individual model as to limitations of module and neck size combination.

SUGGESTED SPECIFICATION:

Furnish and install **Nailor Model** (select one or more) **4070CB, 4080CB (Flush Face)** or **4075CB, 4085CB (Drop Face) Round Neck Steel Fire Rated Perforated Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffusers shall be manufactured from corrosion-resistant steel and have a hinged removable face plate with quick-release spring latches. The discharge pattern is 4-way adjustable (vertical or horizontal) and can be adjusted either before or after installation by dropping the perforated face and moving the curved blade deflectors. Diffusers shall include a factory mounted ceiling damper and thermal blanket. (Optional: ceiling radiation damper shall be supplied with AV adjustable volume control option for field balancing). The finish shall be AW Appliance White (optional finishes are available). Diffusers shall be UL/ULC Classified fire rated ceiling diffuser assemblies as listed in the UL/ULC Fire Resistance (Certifications) Directory. Diffusers shall be tested in accordance with UL Standard 263 (field assembled diffusers with ceiling dampers tested to UL Standard 555C are not acceptable) and meet all of the requirements of NFPA 90A. Diffusers shall be classified for use in restrained or unrestrained floor/ceiling and or roof/ceiling assemblies which incorporate an exposed grid suspended ceiling with up to a 3 hour rating.

PERFORMANCE DATA:

Models 4320, 4320A, 4320AA • Flush Face • 12 x 12 (300 x 300) Module Size

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	1000	1200
	Velocity Pressure		.006	.010	.016	.023	.031	.040	.063	.090
6" Dia.	Total Pressure		.012	.020	.032	.046	.063	.082	.128	.185
	Flow Rate, CFM		58	78	98	117	137	156	196	235
	Throw	4-Way	1-1-1	1-1-1	1-1-3	1-1-4	1-1-4	1-1-5	1-3-6	1-4-8
		3-Way	1-1-2	1-1-4	1-1-5	1-2-6	1-3-7	1-4-8	2-5-11	4-6-13
		2-Way	1-1-3	1-1-6	1-2-7	1-3-9	2-4-10	2-6-12	4-7-15	6-9-16
		1-Way	1-1-4	1-2-7	1-3-9	2-4-11	2-6-13	3-7-14	6-9-17	7-11-19
	Noise Criteria		—	—	—	19	24	28	35	41
8" Dia.	Total Pressure		.014	.022	.035	.049	.065	.086	.132	.194
	Flow Rate, CFM		105	140	175	210	245	280	350	420
	Throw	4-Way	1-1-1	1-1-1	1-1-3	1-1-4	1-1-4	1-1-5	1-3-6	1-4-8
		3-Way	1-1-2	1-1-4	1-1-5	1-2-6	1-3-7	1-4-8	2-5-11	4-6-13
		2-Way	1-1-3	1-1-6	1-2-7	1-3-9	2-4-10	2-6-12	4-7-15	6-9-16
		1-Way	1-1-4	1-2-7	1-3-9	2-4-11	2-6-13	3-7-14	6-9-17	7-11-19
	Noise Criteria		—	—	16	22	27	31	38	44
6 x 6	Total Pressure		.013	.022	.036	.052	.074	.092	.143	.206
	Flow Rate, CFM		75	100	125	150	175	200	250	300
	Throw	4-Way	1-1-1	1-1-2	1-1-3	1-1-4	1-1-5	1-2-6	1-3-8	2-4-9
		3-Way	1-1-3	1-1-5	1-2-6	1-3-8	1-4-9	2-5-10	3-6-13	5-8-16
		2-Way	1-1-4	1-2-7	1-3-9	2-4-10	2-6-12	3-7-14	5-9-18	7-10-19
		1-Way	1-1-6	1-2-8	2-4-11	2-6-13	3-7-15	5-8-17	7-11-20	8-13-22
	Noise Criteria		—	—	16	22	27	31	38	44
8 x 8	Total Pressure		.015	.026	.041	.059	.080	.104	.162	.234
	Flow Rate, CFM		135	175	220	265	310	355	440	530
	Throw	4-Way	1-1-1	1-1-2	1-1-3	1-1-4	1-1-5	1-2-6	1-3-8	2-4-9
		3-Way	1-1-3	1-1-5	1-2-6	1-3-8	1-4-9	2-5-10	3-6-13	5-8-16
		2-Way	1-1-4	1-2-7	1-3-9	2-4-10	2-6-12	3-7-14	5-9-18	7-10-19
		1-Way	1-1-6	1-2-8	2-4-11	2-6-13	3-7-15	5-8-17	7-11-20	8-13-22
	Noise Criteria		—	12	19	25	30	34	41	47

Models 4320, 4320A, 4320AA • Flush Face • 24 x 12 (600 x 300) Module Size

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	1000	1200
	Velocity Pressure		.006	.010	.016	.023	.031	.040	.063	.090
6" Dia.	Total Pressure		.012	.020	.032	.046	.063	.082	.128	.185
	Flow Rate, CFM		58	78	98	117	137	156	196	235
	Throw	4-Way	1-1-1	1-1-1	1-1-3	1-1-4	1-1-4	1-1-5	1-3-6	1-4-8
		3-Way	1-1-2	1-1-4	1-1-5	1-2-6	1-3-7	1-4-8	2-5-11	4-6-13
		2-Way	1-1-3	1-1-6	1-2-7	1-3-9	2-4-10	2-6-12	4-7-15	6-9-16
		1-Way	1-1-4	1-2-7	1-3-9	2-4-11	2-6-13	3-7-14	6-9-17	7-11-19
	Noise Criteria		—	—	—	19	24	28	35	41
8" Dia.	Total Pressure		.014	.022	.035	.049	.065	.086	.132	.194
	Flow Rate, CFM		105	140	175	210	245	280	350	420
	Throw	4-Way	1-1-1	1-1-1	1-1-3	1-1-4	1-1-4	1-1-5	1-3-6	1-4-8
		3-Way	1-1-2	1-1-4	1-1-5	1-2-6	1-3-7	1-4-8	2-5-11	4-6-13
		2-Way	1-1-3	1-1-6	1-2-7	1-3-9	2-4-10	2-6-12	4-7-15	6-9-16
		1-Way	1-1-4	1-2-7	1-3-9	2-4-11	2-6-13	3-7-14	6-9-17	7-11-19
	Noise Criteria		—	—	16	22	27	31	38	44
6 x 6	Total Pressure		.013	.022	.036	.052	.074	.092	.143	.206
	Flow Rate, CFM		75	100	125	150	175	200	250	300
	Throw	4-Way	1-1-1	1-1-2	1-1-3	1-1-4	1-1-5	1-2-6	1-3-8	2-4-9
		3-Way	1-1-3	1-1-5	1-2-6	1-3-8	1-4-9	2-5-10	3-6-13	5-8-16
		2-Way	1-1-4	1-2-7	1-3-9	2-4-10	2-6-12	3-7-14	5-9-18	7-10-19
		1-Way	1-1-6	1-2-8	2-4-11	2-6-13	3-7-15	5-8-17	7-11-20	8-13-22
	Noise Criteria		—	—	16	22	27	31	38	44
8 x 8	Total Pressure		.015	.026	.041	.059	.080	.104	.162	.234
	Flow Rate, CFM		135	175	220	265	310	355	440	530
	Throw	4-Way	1-1-1	1-1-2	1-1-3	1-1-4	1-1-5	1-2-6	1-3-8	2-4-9
		3-Way	1-1-3	1-1-5	1-2-6	1-3-8	1-4-9	2-5-10	3-6-13	5-8-16
		2-Way	1-1-4	1-2-7	1-3-9	2-4-10	2-6-12	3-7-14	5-9-18	7-10-19
		1-Way	1-1-6	1-2-8	2-4-11	2-6-13	3-7-15	5-8-17	7-11-20	8-13-22
	Noise Criteria		—	12	19	25	30	34	41	47

For performance notes, see page D160.

PERFORMANCE DATA:

Models 4320, 4320A, 4320AA • Flush Face • 24 x 24 (600 x 600) and 48 x 24 (1200 x 600) Module Size • Round Neck

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	1000	1200
	Velocity Pressure		.006	.010	.016	.023	.031	.040	.063	.090
6" Dia.	Total Pressure		.012	.020	.032	.046	.062	.082	.128	.185
	Flow Rate, CFM		58	78	98	117	137	156	196	235
	Throw	4-Way	1-1-1	1-1-1	1-1-3	1-1-4	1-1-4	1-1-5	1-3-6	1-4-8
		3-Way	1-1-2	1-1-4	1-1-5	1-2-6	1-3-7	1-4-8	2-5-11	4-6-13
		2-Way	1-1-3	1-1-6	1-2-7	1-3-9	2-4-10	2-6-12	4-7-15	6-9-16
		1-Way	1-1-4	1-2-7	1-3-9	2-4-11	2-6-13	3-7-14	6-9-17	7-11-19
	Noise Criteria		—	—	10	18	21	25	32	38
8" Dia.	Total Pressure		.015	.026	.042	.060	.082	.107	.167	.241
	Flow Rate, CFM		104	139	174	209	244	279	349	418
	Throw	4-Way	1-1-2	1-1-3	1-1-5	1-2-6	1-2-7	1-3-8	2-5-10	3-6-12
		3-Way	1-1-4	1-2-6	1-3-8	2-4-10	2-5-11	3-6-13	5-8-17	6-10-20
		2-Way	1-1-6	1-3-9	2-4-11	3-6-13	4-8-16	5-9-18	7-11-22	9-13-24
		1-Way	1-2-8	1-4-11	2-6-14	4-8-16	5-9-19	7-11-22	9-14-26	11-16-29
	Noise Criteria		—	11	16	22	27	31	38	44
10" Dia.	Total Pressure		.019	.033	.053	.075	.102	.135	.210	.302
	Flow Rate, CFM		163	218	272	327	381	436	545	654
	Throw	4-Way	1-1-3	1-1-5	1-2-7	1-3-8	2-4-10	2-5-11	4-7-14	5-8-17
		3-Way	1-1-7	1-3-9	2-5-11	3-7-14	4-8-16	5-9-18	7-11-23	9-14-27
		2-Way	1-2-9	2-5-12	3-7-15	5-9-19	7-11-22	8-12-26	10-15-32	12-19-34
		1-Way	1-3-11	3-7-15	4-9-19	7-11-23	9-13-28	10-15-31	12-19-36	15-23-39
	Noise Criteria		—	16	21	27	32	36	43	49
12" Dia.	Total Pressure		.022	.040	.063	.091	.124	.162	.253	.364
	Flow Rate, CFM		235	314	392	471	549	628	785	942
	Throw	4-Way	1-1-5	1-2-7	1-3-9	2-5-11	3-6-13	4-7-14	6-9-18	7-11-22
		3-Way	1-2-9	2-5-12	3-7-15	5-9-18	6-10-21	8-12-24	10-15-31	12-18-36
		2-Way	1-4-12	3-7-16	5-10-20	7-12-24	9-14-29	10-16-33	13-20-41	16-24-44
		1-Way	2-6-14	4-9-19	7-12-24	9-14-30	11-17-35	13-19-40	16-24-46	19-30-50
	Noise Criteria		—	19	25	31	36	40	47	53
14" Dia.	Total Pressure		.026	.047	.073	.105	.143	.187	.292	.420
	Flow Rate, CFM		318	424	530	636	742	848	1060	1272
	Throw	4-Way	1-1-6	1-3-9	2-5-11	3-6-13	4-8-16	5-9-18	7-11-23	9-13-28
		3-Way	1-4-11	3-7-14	4-9-18	7-11-22	8-13-27	9-14-30	12-18-38	14-22-44
		2-Way	2-6-15	4-10-20	7-12-26	10-15-31	11-17-36	13-20-41	16-26-50	20-31-54
		1-Way	3-8-18	6-12-24	10-15-31	12-18-38	14-21-44	16-24-50	20-30-57	24-38-62
	Noise Criteria		13	23	29	35	40	44	51	57
15" Dia.	Total Pressure		.029	.052	.081	.117	.159	.208	.324	.467
	Flow Rate, CFM		370	490	615	740	860	985	1225	1475
	Throw	4-Way	1-1-6	1-3-9	2-5-11	3-6-13	4-8-16	5-9-18	7-11-23	9-13-28
		3-Way	1-4-11	3-7-14	4-9-18	7-11-22	8-13-27	9-14-30	12-18-38	14-22-44
		2-Way	2-6-15	4-10-20	7-12-26	10-15-31	11-17-36	13-20-41	16-26-50	20-31-54
		1-Way	3-8-18	6-12-24	10-15-31	12-18-38	14-21-44	16-24-50	20-30-57	24-38-62
	Noise Criteria		15	25	31	37	42	46	53	59
16" Dia.	Total Pressure		.032	.058	.090	.129	.175	.229	.359	.517
	Flow Rate, CFM		418	558	698	837	977	1116	1396	1675
	Throw	4-Way	1-3-10	2-5-13	3-8-15	5-10-16	7-12-77	9-13-19	12-15-21	13-16-23
		3-Way	3-5-9	5-7-10	6-8-11	7-9-12	8-9-13	8-10-14	9-11-16	10-12-18
		2-Way	2-5-11	4-8-13	6-10-14	8-11-16	9-12-17	10-13-18	12-14-20	13-16-22
		1-Way	7-12-21	11-17-24	14-29-28	17-21-31	18-23-33	20-24-36	22-28-40	24-31-43
	Noise Criteria		16	26	32	38	43	47	54	60

For performance notes, see page D160.

PERFORMANCE DATA:

Models 4320, 4320A, 4320AA • Flush Face • 24 x 24 (600 x 600) and 48 x 24 (1200 x 600) Module Size • Square Neck

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	1000	1200
	Velocity Pressure		.006	.010	.016	.023	.031	.040	.063	.090
6 x 6	Total Pressure		.013	.022	.036	.052	.070	.092	.143	.206
	Flow Rate, CFM		75	100	125	150	175	200	250	300
	Throw	4-Way	1-1-1	1-1-2	1-1-3	1-1-4	1-1-5	1-2-6	1-3-8	2-4-9
		3-Way	1-1-3	1-1-5	1-2-6	1-3-8	1-4-9	2-5-10	3-6-13	5-8-16
		2-Way	1-1-4	1-2-7	1-3-9	2-4-10	2-6-12	3-7-14	5-9-18	7-10-19
		1-Way	1-1-6	1-2-8	2-4-11	2-6-13	3-7-15	5-8-17	7-11-20	8-13-22
	Noise Criteria		—	—	12	20	23	27	34	40
8 x 8	Total Pressure		.018	.030	.048	.069	.094	.123	.191	.276
	Flow Rate, CFM		133	177	222	266	310	355	444	532
	Throw	4-Way	1-1-2	1-1-4	1-1-6	1-2-7	1-3-8	2-4-9	3-6-12	4-7-14
		3-Way	1-1-5	1-2-8	1-4-10	2-5-12	3-7-14	4-8-16	6-10-20	8-12-24
		2-Way	1-2-8	1-4-10	2-6-13	4-8-16	5-9-19	7-10-21	9-13-27	10-16-30
		1-Way	1-3-9	2-5-13	3-8-16	5-9-19	7-11-23	8-13-27	11-16-31	13-19-34
	Noise Criteria		—	14	19	25	30	34	41	47
10 x 10	Total Pressure		.021	.038	.059	.086	.116	.152	.237	.341
	Flow Rate, CFM		208	277	347	416	485	555	694	832
	Throw	4-Way	1-1-4	1-2-6	1-3-8	2-4-10	2-5-11	3-6-13	5-8-16	6-10-20
		3-Way	1-2-8	1-4-11	3-6-13	4-8-16	5-9-19	7-11-22	9-13-28	11-16-33
		2-Way	1-3-11	3-6-14	4-9-18	6-11-22	8-13-27	9-14-30	12-18-37	14-22-40
		1-Way	2-5-13	4-9-18	6-11-22	9-13-28	10-16-33	12-18-37	15-22-42	18-28-46
	Noise Criteria		—	17	24	30	35	39	45	52
12 x 12	Total Pressure		.025	.046	.071	.103	.140	.183	.286	.411
	Flow Rate, CFM		300	400	500	600	700	800	1000	1200
	Throw	4-Way	1-1-6	1-3-8	2-4-11	3-6-13	4-7-15	5-8-17	7-11-22	8-13-27
		3-Way	1-3-10	2-6-14	4-9-18	6-10-21	8-12-26	9-14-29	11-18-37	14-21-42
		2-Way	2-5-14	4-9-19	7-12-24	9-14-30	11-17-35	13-19-40	16-24-47	19-30-52
		1-Way	3-8-17	6-11-23	9-14-30	11-17-36	13-20-42	15-23-48	19-30-54	23-36-59
	Noise Criteria		12	21	28	34	39	43	49	56
14 x 14	Total Pressure		.031	.055	.086	.124	.169	.221	.345	.497
	Flow Rate, CFM		410	545	680	815	955	1090	1360	1635
	Throw	4-Way	1-1-6	1-3-8	2-4-11	3-6-13	4-7-15	5-8-17	7-11-22	8-13-27
		3-Way	1-3-10	2-6-14	4-9-18	6-10-21	8-12-26	9-14-29	11-18-37	14-21-42
		2-Way	2-5-14	4-9-19	7-12-24	9-14-30	11-17-35	13-19-40	16-24-47	19-30-52
		1-Way	3-8-17	6-11-23	9-14-30	11-17-36	13-20-42	15-23-48	19-30-54	23-36-59
	Noise Criteria		15	24	31	37	42	46	52	59

Performance Notes:

1. All pressures are in inches w.g..
2. Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
3. Noise Criteria (NC) values are based on 10 dB room absorption, re 10^{-12} watts. Dash (—) in spaces indicates an Noise Criteria level of less than 10.
4. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

Neck Size Square in Inches	Nominal Overall Face Size	Ak Factor
6 x 6	12 x 12	.2345
8 x 8	12 x 12	.3461
6 x 6	24 x 24	.6932
8 x 8	24 x 24	.7620
10 x 10	24 x 24	.7995
12 x 12	24 x 24	.8465
14 x 14	24 x 24	.8993

Neck Size Diameter in Inches	Nominal Overall Face Size	Ak Factor
6	12 x 12	.2289
8	12 x 12	.3461
6	24 x 24	.6010
8	24 x 24	.6854
10	24 x 24	.7283
12	24 x 24	.7651
14	24 x 24	.8102
15	24 x 24	.8389

PERFORMANCE DATA:

Models 4325, 4325A, 4325AA • Drop Face • 12 x 12 (300 x 300) Module Size

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	1000	1200
	Velocity Pressure		.006	.010	.016	.023	.031	.040	.063	.090
6" Dia.	Total Pressure		.009	.016	.025	.036	.049	.063	.099	.143
	Flow Rate, CFM		58	78	98	117	137	156	196	235
	Throw	4-Way	1-1-1	1-1-2	1-1-3	1-1-3	1-2-4	1-2-4	2-3-6	2-3-6
		3-Way	1-1-2	1-1-3	1-2-4	1-2-5	1-3-6	2-3-7	3-4-9	3-5-9
		2-Way	1-1-3	1-1-4	1-2-5	1-3-6	2-3-7	2-4-8	3-5-11	4-6-12
		1-Way	1-1-4	1-2-6	1-3-7	2-4-9	3-5-10	4-6-12	5-7-15	6-9-16
	Noise Criteria		—	—	—	16	21	25	32	38
8" Dia.	Total Pressure		.010	.017	.026	.037	.051	.067	.104	.150
	Flow Rate, CFM		105	140	175	210	245	280	350	420
	Throw	4-Way	1-1-1	1-1-1	1-1-3	1-1-4	1-1-4	1-1-5	1-3-6	1-4-8
		3-Way	1-1-2	1-1-4	1-1-5	1-2-6	1-3-7	1-4-8	2-5-11	4-6-13
		2-Way	1-1-3	1-1-6	1-2-7	1-3-9	2-4-10	2-6-12	4-7-15	6-9-16
		1-Way	1-1-4	1-2-7	1-3-9	2-4-11	2-6-13	3-7-14	6-9-17	7-11-19
	Noise Criteria		—	—	14	20	25	29	36	42
6 x 6	Total Pressure		.010	.019	.028	.041	.056	.072	.113	.163
	Flow Rate, CFM		75	100	125	150	175	200	250	300
	Throw	4-Way	1-1-2	1-1-3	1-1-3	1-2-4	1-2-5	2-3-6	2-3-7	3-4-7
		3-Way	1-1-3	1-1-4	1-2-5	1-3-6	2-4-8	3-4-9	3-5-10	4-6-11
		2-Way	1-1-4	1-2-5	1-3-7	2-4-8	3-4-9	3-5-11	4-7-13	5-8-14
		1-Way	1-1-5	1-3-7	2-4-9	3-5-11	4-6-13	5-7-15	6-9-17	7-11-19
	Noise Criteria		—	—	13	19	24	28	35	41
8 x 8	Total Pressure		.012	.021	.032	.046	.063	.082	.128	.185
	Flow Rate, CFM		135	175	220	265	310	355	440	530
	Throw	4-Way	1-1-1	1-1-2	1-1-3	1-1-4	1-1-5	1-2-6	1-3-8	2-4-9
		3-Way	1-1-3	1-1-5	1-2-6	1-3-8	1-4-9	2-5-10	3-6-13	5-8-16
		2-Way	1-1-4	1-2-7	1-3-9	2-4-10	2-6-12	3-7-14	5-9-18	7-10-19
		1-Way	1-1-6	1-2-8	2-4-11	2-6-13	3-7-15	5-8-17	7-11-20	8-13-22
	Noise Criteria		—	10	17	23	28	32	39	45

Models 4325, 4325A, 4325AA • Drop Face • 24 x 12 (600 x 300) Module Size

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	1000	1200
	Velocity Pressure		.006	.010	.016	.023	.031	.040	.063	.090
6" Dia.	Total Pressure		.009	.016	.025	.036	.049	.063	.099	.143
	Flow Rate, CFM		58	78	98	117	137	156	196	235
	Throw	4-Way	1-1-1	1-1-2	1-1-3	1-1-3	1-2-4	1-2-4	2-3-6	2-3-6
		3-Way	1-1-2	1-1-3	1-2-4	1-2-5	1-3-6	2-3-7	3-4-9	3-5-9
		2-Way	1-1-3	1-1-4	1-2-5	1-3-6	2-3-7	2-4-8	3-5-11	4-6-12
		1-Way	1-1-4	1-2-6	1-3-7	2-4-9	3-5-10	4-6-12	5-7-15	6-9-16
	Noise Criteria		—	—	—	16	21	25	32	38
8" Dia.	Total Pressure		.010	.017	.026	.037	.051	.067	.104	.150
	Flow Rate, CFM		105	140	175	210	245	280	350	420
	Throw	4-Way	1-1-1	1-1-1	1-1-3	1-1-4	1-1-4	1-1-5	1-3-6	1-4-8
		3-Way	1-1-2	1-1-4	1-1-5	1-2-6	1-3-7	1-4-8	2-5-11	4-6-13
		2-Way	1-1-3	1-1-6	1-2-7	1-3-9	2-4-10	2-6-12	4-7-15	6-9-16
		1-Way	1-1-4	1-2-7	1-3-9	2-4-11	2-6-13	3-7-14	6-9-17	7-11-19
	Noise Criteria		—	—	14	20	25	29	36	42
6 x 6	Total Pressure		.013	.022	.036	.052	.074	.092	.143	.206
	Flow Rate, CFM		75	100	125	150	175	200	250	300
	Throw	4-Way	1-1-1	1-1-2	1-1-3	1-1-4	1-1-5	1-2-6	1-3-8	2-4-9
		3-Way	1-1-3	1-1-5	1-2-6	1-3-8	1-4-9	2-5-10	3-6-13	5-8-16
		2-Way	1-1-4	1-2-7	1-3-9	2-4-10	2-6-12	3-7-14	5-9-18	7-10-19
		1-Way	1-1-6	1-2-8	2-4-11	2-6-13	3-7-15	5-8-17	7-11-20	8-13-22
	Noise Criteria		—	—	13	19	24	28	35	41
8 x 8	Total Pressure		.012	.021	.032	.046	.063	.082	.128	.185
	Flow Rate, CFM		135	175	220	265	310	355	440	530
	Throw	4-Way	1-1-1	1-1-2	1-1-3	1-1-4	1-1-5	1-2-6	1-3-8	2-4-9
		3-Way	1-1-3	1-1-5	1-2-6	1-3-8	1-4-9	2-5-10	3-6-13	5-8-16
		2-Way	1-1-4	1-2-7	1-3-9	2-4-10	2-6-12	3-7-14	5-9-18	7-10-19
		1-Way	1-1-6	1-2-8	2-4-11	2-6-13	3-7-15	5-8-17	7-11-20	8-13-22
	Noise Criteria		—	10	17	23	28	32	39	45

For performance notes, see page D163.

PERFORMANCE DATA:

Models 4325, 4325A, 4325AA • Drop Face • 24 x 24 (600 x 600) Module Size • Round Neck

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	1000	1200
	Velocity Pressure		.006	.010	.016	.023	.031	.040	.063	.090
6" Dia.	Total Pressure		.009	.016	.025	.036	.049	.063	.099	.143
	Flow Rate, CFM		58	78	98	117	137	156	196	235
	Throw	4-Way	1-1-1	1-1-2	1-1-3	1-1-3	1-2-4	1-2-4	2-3-6	2-3-6
		3-Way	1-1-2	1-1-3	1-2-4	1-2-5	1-3-6	2-3-7	3-4-9	3-5-9
		2-Way	1-1-3	1-1-4	1-2-5	1-3-6	2-3-7	2-4-8	3-5-11	4-6-12
		1-Way	1-1-4	1-2-6	1-3-7	2-4-9	3-5-10	4-6-12	5-7-15	6-9-16
	Noise Criteria		—	—	—	15	18	22	29	35
8" Dia.	Total Pressure		.013	.021	.034	.049	.066	.087	.136	.195
	Flow Rate, CFM		104	139	174	209	244	279	349	418
	Throw	4-Way	1-1-3	1-1-4	1-2-5	1-3-6	2-3-7	2-4-8	3-5-8	4-6-9
		3-Way	1-1-4	1-2-6	2-3-7	2-4-9	3-5-11	4-6-12	5-7-13	6-9-14
		2-Way	1-2-5	1-3-7	2-4-9	3-5-11	4-6-13	5-7-15	6-9-16	7-11-18
		1-Way	1-2-7	2-4-10	3-6-12	4-7-15	6-9-18	6-10-19	8-12-21	10-15-23
	Noise Criteria		—	—	13	18	24	28	35	41
10" Dia.	Total Pressure		.016	.027	.043	.061	.084	.109	.171	.245
	Flow Rate, CFM		163	218	272	327	381	436	545	654
	Throw	4-Way	1-1-4	1-3-6	2-3-7	3-4-9	3-5-10	4-6-10	5-7-12	6-9-13
		3-Way	1-2-7	2-4-9	3-6-12	4-7-14	5-8-15	6-9-16	8-12-18	9-14-20
		2-Way	1-3-8	2-5-11	4-7-14	5-8-17	6-10-19	7-11-20	9-14-22	11-17-26
		1-Way	2-4-11	3-7-15	6-9-19	7-11-23	9-13-26	10-15-28	13-19-31	15-23-34
	Noise Criteria		—	13	18	24	29	33	40	46
12" Dia.	Total Pressure		.019	.033	.052	.074	.101	.132	.207	.297
	Flow Rate, CFM		235	314	392	471	549	628	785	942
	Throw	4-Way	1-3-6	2-4-9	3-5-11	4-6-12	5-7-13	6-9-14	7-11-15	9-12-17
		3-Way	2-4-10	3-6-13	5-8-16	6-10-18	7-11-19	9-13-20	11-16-23	13-18-26
		2-Way	2-5-12	4-8-16	6-10-20	8-12-22	9-14-24	11-16-22	13-20-30	16-22-33
		1-Way	3-7-16	6-11-22	9-14-28	11-16-30	13-19-33	14-22-35	18-28-39	22-30-43
	Noise Criteria		—	17	23	29	34	38	45	51
14" Dia.	Total Pressure		.021	.038	.059	.086	.117	.153	.239	.344
	Flow Rate, CFM		318	424	530	636	742	848	1060	1272
	Throw	4-Way	2-4-8	3-5-11	4-7-13	5-8-14	6-10-16	7-11-17	9-13-19	11-14-21
		3-Way	3-6-13	5-9-18	7-11-20	9-13-22	10-15-24	12-18-26	15-20-29	18-23-32
		2-Way	3-8-16	6-11-22	9-13-26	11-16-28	12-19-31	14-22-33	18-27-36	22-28-40
		1-Way	5-11-22	9-14-30	12-18-35	14-22-38	17-27-41	19-30-44	24-35-49	30-38-51
	Noise Criteria		10	20	28	32	37	41	48	54
15" Dia.	Total Pressure		.022	.040	.062	.091	.127	.171	.265	.366
	Flow Rate, CFM		370	490	615	740	860	985	1225	1475
	Throw	4-Way	2-4-7	3-5-10	4-7-12	5-8-14	6-9-15	7-10-17	9-12-19	10-13-21
		3-Way	3-6-13	5-9-19	7-10-19	9-12-22	10-15-23	12-18-26	14-19-29	18-22-32
		2-Way	3-8-15	6-11-21	8-12-26	11-15-28	11-19-30	13-21-32	18-27-35	21-27-40
		1-Way	5-10-21	8-14-29	11-17-34	13-21-36	17-26-40	18-29-42	24-34-47	28-36-50
	Noise Criteria		12	22	28	34	39	43	50	56
16" Dia.	Total Pressure		.025	.045	.070	.100	.137	.179	.280	.403
	Flow Rate, CFM		418	558	698	837	977	1116	1396	1675
	Throw	4-Way	3-5-11	5-7-15	6-9-17	7-11-18	8-13-20	10-15-21	12-17-24	15-18-27
		3-Way	2-6-13	4-9-17	7-11-19	9-13-21	10-16-22	12-17-24	15-19-28	17-21-30
		2-Way	2-6-13	4-9-17	7-11-19	9-13-21	10-16-22	12-17-24	15-19-28	17-21-30
		1-Way	7-12-23	12-17-27	15-21-31	18-23-34	20-26-36	22-27-39	24-31-43	26-34-47
	Noise Criteria		13	23	29	35	40	44	51	57

For performance notes, see page D163.

PERFORMANCE DATA:

Models 4325, 4325A, 4325AA • Drop Face • 24 x 24 (600 x 600) Module Size • Square Neck

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	1000	1200
	Velocity Pressure		.006	.010	.016	.023	.031	.040	.063	.090
6 x 6	Total Pressure		.010	.019	.028	.041	.056	.072	.113	.163
	Flow Rate, CFM		75	100	125	150	175	200	250	300
	Throw	4-Way	1-1-2	1-1-3	1-1-3	1-2-4	1-2-5	2-3-6	2-3-7	3-4-7
		3-Way	1-1-3	1-1-4	1-2-5	1-3-6	2-4-8	3-4-9	3-5-10	4-6-11
		2-Way	1-1-4	1-2-5	1-3-7	2-4-8	3-4-9	3-5-11	4-7-13	5-8-14
		1-Way	1-1-5	1-3-7	2-4-9	3-5-11	4-6-13	5-7-15	6-9-17	7-11-19
	Noise Criteria		—	—	—	17	20	24	31	37
8 x 8	Total Pressure		.014	.024	.038	.056	.075	.098	.153	.220
	Flow Rate, CFM		133	177	222	266	310	355	444	532
	Throw	4-Way	1-1-3	1-2-5	1-3-6	2-3-7	3-4-8	3-5-9	4-6-10	5-7-11
		3-Way	1-2-5	1-3-7	2-4-9	3-5-11	4-6-13	5-7-14	6-9-15	7-11-17
		2-Way	1-2-7	2-4-9	3-6-12	4-7-14	5-8-16	6-9-17	8-12-19	9-14-21
		1-Way	1-3-9	3-6-13	4-8-16	6-9-19	7-11-21	8-13-23	10-16-27	13-19-29
	Noise Criteria		—	11	16	22	27	31	38	44
10 x 10	Total Pressure		.018	.031	.049	.069	.095	.124	.193	.278
	Flow Rate, CFM		208	277	347	416	485	555	694	832
	Throw	4-Way	1-2-5	2-3-7	3-4-9	3-5-11	4-6-12	5-7-12	6-9-14	7-11-15
		3-Way	1-4-8	3-5-11	4-7-14	5-8-16	6-10-18	7-11-19	9-14-21	11-16-23
		2-Way	2-5-11	4-7-14	6-9-18	7-11-20	8-13-22	9-14-24	12-18-28	14-20-30
		1-Way	3-6-14	5-9-19	8-12-24	9-14-28	11-17-30	13-19-32	16-24-36	19-28-39
	Noise Criteria		—	14	21	27	32	36	42	49
12 x 12	Total Pressure		.02	.037	.058	.084	.114	.149	.233	.335
	Flow Rate, CFM		300	400	500	600	700	800	1000	1200
	Throw	4-Way	1-4-8	3-5-11	4-7-13	5-8-14	6-9-15	7-11-16	9-13-18	11-14-20
		3-Way	2-6-12	5-8-17	7-10-19	8-12-21	10-15-23	11-17-24	14-19-28	17-21-31
		2-Way	3-7-15	6-10-21	8-13-24	10-15-27	12-18-29	14-21-32	17-24-35	21-27-38
		1-Way	4-10-21	8-14-29	11-17-33	14-21-36	16-24-39	18-29-42	23-33-46	28-36-51
	Noise Criteria		—	18	25	31	36	40	46	53
14 x 14	Total Pressure		.025	.046	.071	.103	.140	.183	.286	.411
	Flow Rate, CFM		408	544	681	817	953	1089	1361	1633
	Throw	4-Way	1-1-6	1-3-8	2-4-11	3-6-13	4-7-15	5-8-17	7-11-22	8-13-27
		3-Way	1-3-10	2-6-14	4-9-18	6-10-21	8-12-26	9-14-29	11-18-37	14-21-42
		2-Way	2-5-14	4-9-19	7-12-24	9-14-30	11-17-35	13-19-40	16-24-47	19-30-52
		1-Way	3-8-17	6-11-23	9-14-30	11-17-36	13-20-42	15-23-48	19-30-54	23-36-59
	Noise Criteria		12	21	28	34	39	43	49	56

Performance Notes:

1. All pressures are in inches w.g..
2. Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
3. Noise Criteria (NC) values are based upon 10 dB room absorption, re 10^{-12} watts. Dash (—) in space indicates an Noise Criteria of less than 10.
4. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

Balancing:

It is recommended that a commercially available 'Flow Hood' is used for field balancing. The airflow meter directly reads average flow rate with great accuracy at all volumes. It is a much faster and more accurate alternative to time consuming multiple velocity readings, eliminating the use of Ak factors and the calculations required to convert the average velocity into airflow.

PERFORMANCE DATA:

Models 4320CB, 4325CB, 4320CBA, 4325CBA, 4320CBAA, 4325CBAA • 12 x 12 Module Size

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	900	1100
	Velocity Pressure		.006	.010	.016	.023	.031	.040	.051	.075
6" Dia.	Total Pressure		.023	.042	.037	.039	.052	.159	.204	.307
	Flow Rate, CFM		60	80	95	115	135	155	175	215
	Throw	4-Way	1-2-4	2-3-6	2-4-7	3-5-7	3-5-8	4-6-9	5-6-9	6-6-11
		3-Way	2-3-6	2-4-8	3-5-11	4-6-12	5-7-13	5-8-14	6-10-15	7-11-16
		2-Way	2-4-8	3-5-11	4-6-13	5-8-15	6-9-16	7-11-18	8-12-20	9-13-22
		1-Way	3-4-9	4-6-12	5-8-16	6-9-18	7-11-20	8-12-22	9-14-23	10-16-26
	Noise Criteria		—	—	—	18	23	28	32	40
8" Dia.	Total Pressure		.025	.045	.069	.102	.137	.180	.227	.340
	Flow Rate, CFM		105	140	175	210	245	280	315	385
	Throw	4-Way	2-3-6	2-4-8	3-5-9	4-6-10	4-7-11	4-8-12	5-9-12	6-9-15
		3-Way	2-3-7	3-4-9	3-5-11	4-7-12	5-8-13	6-9-14	7-10-14	8-11-16
		2-Way	3-4-9	4-6-13	5-8-15	6-9-17	7-11-18	8-13-20	9-14-21	10-16-24
		1-Way	3-5-11	5-7-15	6-9-18	7-11-21	8-13-22	10-15-24	11-17-25	12-19-29
	Noise Criteria		—	—	15	21	26	31	34	41
6 x 6	Total Pressure		.025	.045	.066	.096	.132	.175	.224	.338
	Flow Rate, CFM		75	100	125	150	175	200	225	275
	Throw	4-Way	1-2-5	2-3-7	3-4-8	3-5-8	4-6-9	5-7-10	5-7-11	6-8-12
		3-Way	2-3-6	2-4-8	3-5-11	4-6-12	5-7-13	5-8-14	6-10-15	7-11-17
		2-Way	3-4-9	4-6-12	5-7-15	6-9-17	7-10-20	8-12-21	9-14-22	10-16-25
		1-Way	3-5-10	4-7-14	6-9-18	7-10-21	8-12-23	9-14-24	10-16-26	11-18-29
	Noise Criteria		—	—	—	19	24	29	33	41
8 x 8	Total Pressure		.027	.049	.076	.112	.151	.197	.249	.374
	Flow Rate, CFM		135	175	220	265	310	355	400	490
	Throw	4-Way	2-3-6	3-4-9	3-5-10	4-6-11	5-8-12	6-9-13	6-10-14	7-11-16
		3-Way	2-3-7	3-5-10	4-6-12	5-7-13	6-9-14	7-10-15	7-11-16	8-12-18
		2-Way	3-5-11	4-7-14	6-9-17	7-11-20	8-13-21	9-14-23	11-16-24	12-18-27
		1-Way	4-6-12	5-8-17	7-10-21	8-12-23	9-14-25	11-17-27	12-20-28	14-23-32
	Noise Criteria		—	—	16	22	27	32	35	42

Models 4320CB, 4325CB, 4320CBA, 4325CBA, 4320CBAA, 4325CBAA • 24 x 12 Module Size

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	900	1100
	VP		.006	.010	.016	.023	.031	.040	.051	.075
6" Dia.	Total Pressure		.023	.042	.037	.039	.052	.159	.204	.307
	Flow Rate, CFM		60	80	95	115	135	155	175	215
	Throw	4-Way	1-2-4	2-3-6	2-4-7	3-5-7	3-5-8	4-6-9	5-6-9	6-6-11
		3-Way	2-3-6	2-4-8	3-5-11	4-6-12	5-7-13	5-8-14	6-10-15	7-11-16
		2-Way	2-4-8	3-5-11	4-6-13	5-8-15	6-9-16	7-11-18	8-12-20	9-13-22
		1-Way	3-4-9	4-6-12	5-8-16	6-9-18	7-11-20	8-12-22	9-14-23	10-16-26
	Noise Criteria		—	—	—	18	23	28	32	40
8" Dia.	Total Pressure		.025	.045	.069	.102	.137	.180	.227	.340
	Flow Rate, CFM		105	140	175	210	245	280	315	385
	Throw	4-Way	2-3-6	2-4-8	3-5-9	4-6-10	4-7-11	4-8-12	5-9-12	6-9-15
		3-Way	2-3-7	3-4-9	3-5-11	4-7-12	5-8-13	6-9-14	7-10-14	8-11-16
		2-Way	3-4-9	4-6-13	5-8-15	6-9-17	7-11-18	8-13-20	9-14-21	10-16-24
		1-Way	3-5-11	5-7-15	6-9-18	7-11-21	8-13-22	10-15-24	11-17-25	12-19-29
	Noise Criteria		—	—	15	21	26	31	34	41
6 x 6	Total Pressure		.025	.045	.066	.096	.132	.175	.224	.338
	Flow Rate, CFM		75	100	125	150	175	200	225	275
	Throw	4-Way	1-2-5	2-3-7	3-4-8	3-5-8	4-6-9	5-7-10	5-7-11	6-8-12
		3-Way	2-3-6	2-4-8	3-5-11	4-6-12	5-7-13	5-8-14	6-10-15	7-11-17
		2-Way	3-4-9	4-6-12	5-7-15	6-9-17	7-10-20	8-12-21	9-14-22	10-16-25
		1-Way	3-5-10	4-7-14	6-9-18	7-10-21	8-12-23	9-14-24	10-16-26	11-18-24
	Noise Criteria		—	—	—	19	24	29	33	41
8 x 8	Total Pressure		.027	.049	.076	.112	.151	.197	.249	.374
	Flow Rate, CFM		135	175	220	265	310	355	400	490
	Throw	4-Way	2-3-6	3-4-9	3-5-10	4-6-11	5-8-12	6-9-13	6-10-14	7-11-16
		3-Way	2-3-7	3-5-10	4-6-12	5-7-13	6-9-14	7-10-15	7-11-16	8-12-18
		2-Way	3-5-11	4-7-14	6-9-17	7-11-20	8-13-21	9-14-23	11-16-24	12-18-27
		1-Way	4-6-12	5-8-17	7-10-21	8-12-23	9-14-25	11-17-27	12-20-28	14-23-32
	Noise Criteria		—	—	16	22	27	32	35	42

For performance notes, see page D171.

PERFORMANCE DATA:

Models 4320CB, 4325CB, 4320CBA, 4325CBA, 4320CBAA, 4325CBAA • 24 x 24 (600 x 600) Module Size • Round Neck

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	900	1100
	Velocity Pressure		.006	.010	.016	.023	.031	.040	.051	.075
6" Dia.	Total Pressure		.014	.025	.036	.052	.071	.094	.120	.181
	Flow Rate, CFM		60	80	95	115	135	155	175	215
	Throw	4-Way	1-2-4	2-3-6	2-3-7	3-4-7	3-5-8	4-6-9	4-6-9	5-6-11
		3-Way	1-2-5	2-3-7	2-4-8	3-5-9	4-6-9	4-7-10	5-7-11	6-8-12
		2-Way	2-3-7	3-4-9	4-6-11	4-7-12	5-8-13	6-9-14	7-11-15	8-12-17
		1-Way	2-4-8	3-5-11	4-7-13	5-8-15	6-9-16	7-11-17	8-12-18	9-14-21
	Noise Criteria		—	—	—	17	22	26	28	35
8" Dia.	Total Pressure		.015	.027	.041	.060	.081	.106	.134	.200
	Flow Rate, CFM		105	140	175	210	245	280	315	385
	Throw	4-Way	2-3-6	2-4-8	3-5-9	4-6-10	4-7-11	4-8-12	5-9-12	6-9-15
		3-Way	2-3-7	3-4-9	3-5-11	4-7-12	5-8-13	6-9-14	7-10-14	8-11-16
		2-Way	3-4-9	4-6-13	5-8-15	6-9-17	7-11-18	8-13-20	9-14-21	10-16-24
		1-Way	3-5-11	5-7-15	6-9-18	7-11-21	8-13-22	10-15-24	11-17-25	12-19-29
	Noise Criteria		—	—	17	21	26	30	32	37
10" Dia.	Total Pressure		.017	.029	.045	.066	.090	.118	.149	.224
	Flow Rate, CFM		165	215	270	325	380	435	490	600
	Throw	4-Way	2-3-7	3-5-10	4-6-12	5-7-13	5-8-14	6-10-15	7-11-16	8-12-19
		3-Way	2-4-8	3-5-11	4-7-13	5-8-15	6-10-16	7-11-17	8-13-18	9-15-21
		2-Way	4-6-12	5-8-16	6-10-20	8-12-22	9-14-23	10-16-25	12-18-27	14-21-31
		1-Way	4-7-14	6-9-18	7-11-23	9-14-26	11-16-28	12-18-29	14-22-31	16-25-35
	Noise Criteria		—	—	19	23	28	31	34	40
12" Dia.	Total Pressure		.018	.032	.050	.072	.099	.127	.162	.394
	Flow Rate, CFM		235	315	390	470	550	625	705	865
	Throw	4-Way	3-4-9	4-6-12	5-7-14	6-9-15	7-10-17	8-12-18	9-13-20	10-15-22
		3-Way	3-5-10	4-7-14	5-8-16	7-10-18	8-12-20	9-14-22	10-15-23	11-17-26
		2-Way	4-7-14	6-9-20	8-12-24	9-14-26	11-17-28	13-20-30	14-23-32	16-26-36
		1-Way	5-8-17	7-11-23	9-14-28	11-17-31	13-20-33	15-23-35	17-26-37	19-29-42
	Noise Criteria		—	16	21	25	29	33	36	42
14" Dia.	Total Pressure		.019	.034	.054	.078	.107	.139	.175	.230
	Flow Rate, CFM		320	425	535	640	750	855	960	1175
	Throw	4-Way	3-5-10	4-7-14	5-8-16	7-10-18	8-12-21	9-14-22	10-16-23	14-19-26
		3-Way	4-6-12	5-8-16	6-10-20	8-12-22	9-14-24	10-16-25	12-18-27	14-21-31
		2-Way	5-8-17	7-11-24	9-14-28	11-17-30	13-21-33	15-24-35	17-26-37	19-29-42
		1-Way	6-9-20	8-13-27	11-16-33	13-20-36	15-24-38	17-27-41	20-30-43	23-34-49
	Noise Criteria		—	17	22	26	30	34	38	45
15" Dia.	Total Pressure		.011	.036	.056	.081	.110	.144	.180	.271
	Flow Rate, CFM		370	490	615	740	860	985	1100	1350
	Throw	4-Way	3-6-10	4-2-14	5-8-17	8-10-19	8-13-21	10-14-23	10-16-24	14-19-26
		3-Way	4-6-12	6-8-17	6-11-21	8-13-22	10-14-25	11-16-26	13-18-28	15-21-32
		2-Way	4-8-17	7-12-25	9-15-30	11-18-31	13-22-34	16-25-35	17-27-38	19-31-43
		1-Way	6-9-20	8-14-28	12-17-34	14-21-37	16-24-39	18-27-42	17-31-43	19-35-49
	Noise Criteria		—	18	23	27	31	35	39	46
16" Dia.	Total Pressure		.021	.038	.059	.084	.114	.149	.189	.283
	Flow Rate, CFM		420	560	700	835	975	1115	1255	1535
	Throw	4-Way	4-6-12	5-8-16	6-10-20	8-12-22	9-14-23	10-16-25	12-18-26	16-22-31
		3-Way	4-7-14	6-9-18	7-11-23	9-14-25	10-16-27	12-18-29	14-22-30	16-25-34
		2-Way	6-9-20	8-13-27	10-16-32	13-20-35	15-24-37	17-27-40	20-30-42	23-34-48
		1-Way	7-11-23	10-15-31	12-18-37	15-23-41	17-27-44	21-31-47	23-35-50	26-40-57
	Noise Criteria		—	19	24	28	32	36	40	47
18" Dia.	Total Pressure		.022	.039	.061	.087	.118	.155	.196	.293
	Flow Rate, CFM		530	705	885	1060	1235	1415	1590	1945
	Throw	4-Way	4-7-14	5-9-18	7-10-20	9-13-24	10-16-26	10-19-28	13-21-29	17-25-33
		3-Way	4-7-17	6-10-21	8-12-24	10-15-28	11-20-30	13-22-32	17-24-34	19-27-39
		2-Way	7-10-23	10-14-29	11-17-34	15-22-36	18-28-43	20-30-44	24-34-50	27-39-57
		1-Way	8-12-26	11-17-33	14-21-40	18-25-45	21-32-50	23-38-53	29-40-56	33-46-64
	Noise Criteria		—	21	26	30	34	38	42	49

For performance notes, see page D171.

PERFORMANCE DATA:

Models 4320CB, 4325CB, 4320CBA, 4325CBA, 4320CBAA, 4325CBAA • 24 x 24 (600 x 600) Module Size • Square Neck

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	900	1100
	Velocity Pressure		.006	.010	.016	.023	.031	.040	.051	.075
6 x 6	Total Pressure		.015	.027	.039	.057	.078	.103	.132	.199
	Flow Rate, CFM		75	100	125	150	175	200	225	275
	Throw	4-Way	1-2-5	2-3-7	3-4-8	3-5-8	4-6-9	5-7-10	5-7-11	6-8-12
		3-Way	2-3-6	2-4-8	3-5-11	4-6-12	5-7-13	5-8-14	6-10-15	7-11-16
		2-Way	3-4-9	4-6-12	5-7-15	6-9-17	7-10-20	8-12-21	9-14-22	10-16-25
		1-Way	3-5-10	4-7-14	6-9-18	7-10-21	8-12-23	9-14-24	10-16-26	11-18-29
	Noise Criteria		—	—	—	18	23	27	29	35
8 x 8	Total Pressure		.016	.029	.045	.066	.089	.116	.147	.220
	Flow Rate, CFM		135	175	220	265	310	355	400	490
	Throw	4-Way	2-3-6	3-4-9	3-5-10	4-6-11	5-8-12	6-9-13	6-10-14	7-11-16
		3-Way	2-3-7	3-5-10	4-6-12	5-7-13	6-9-14	7-10-15	7-11-16	8-12-18
		2-Way	3-5-11	4-7-14	6-9-17	7-11-20	8-13-21	9-14-23	11-16-24	12-18-27
		1-Way	4-6-12	5-8-17	7-10-21	8-12-23	9-14-25	11-17-27	12-20-28	15-22-32
	Noise Criteria		—	—	18	22	27	31	33	38
10 x 10	Total Pressure		.018	.031	.049	.072	.099	.129	.163	.246
	Flow Rate, CFM		210	275	345	415	485	555	625	765
	Throw	4-Way	2-4-8	3-5-11	4-7-13	5-8-14	6-10-16	7-11-17	8-12-18	9-13-21
		3-Way	3-4-9	4-6-13	5-8-15	6-9-17	7-11-18	8-13-20	9-14-22	10-16-25
		2-Way	4-6-13	6-9-18	7-11-22	9-13-25	10-16-26	12-18-28	13-21-30	15-24-34
		1-Way	5-8-16	7-10-22	8-13-26	10-16-29	12-18-31	14-22-33	16-25-35	18-29-40
	Noise Criteria		—	—	20	24	29	32	35	41
12 x 12	Total Pressure		.019	.035	.055	.079	.108	.139	.178	.433
	Flow Rate, CFM		300	400	500	600	700	800	900	1100
	Throw	4-Way	3-5-10	4-6-13	5-8-16	6-10-17	8-12-20	9-13-21	10-15-22	11-17-25
		3-Way	3-5-11	5-7-15	6-9-18	7-11-21	9-13-23	10-15-24	11-17-26	12-19-29
		2-Way	5-8-16	7-11-23	9-13-27	11-16-29	13-20-32	14-23-34	16-25-36	18-29-41
		1-Way	6-9-20	8-12-26	10-16-31	12-20-34	14-23-37	17-26-40	22-31-44	25-35-50
	Noise Criteria		—	17	22	26	30	34	37	43
14 x 14	Total Pressure		.020	.037	.059	.085	.117	.152	.192	.253
	Flow Rate, CFM		410	545	680	815	955	1090	1225	1500
	Throw	4-Way	1-1-6	1-3-8	2-4-11	3-6-13	4-7-15	5-8-17	7-11-22	8-12-25
		3-Way	1-3-10	2-6-14	4-9-18	6-10-21	8-12-26	9-14-29	11-18-37	12-21-42
		2-Way	2-5-14	4-9-19	7-12-24	9-14-30	11-17-35	13-19-40	16-24-47	18-27-54
		1-Way	3-8-17	6-11-23	9-14-30	11-17-36	13-20-42	15-23-48	19-30-54	22-35-64
	Noise Criteria		—	18	23	27	31	35	39	46
15 x 15	Total Pressure		.012	.039	.061	.089	.121	.158	.198	.298
	Flow Rate, CFM		470	625	780	935	1095	1250	1405	1720
	Throw	4-Way	4-6-12	5-8-17	7-10-21	8-12-23	10-15-25	11-17-26	12-20-28	13-22-32
		3-Way	4-7-14	6-9-20	8-12-24	9-14-26	11-17-28	13-20-30	14-23-32	16-26-36
		2-Way	6-10-21	9-13-28	11-17-33	13-21-37	16-25-40	18-28-42	21-32-45	24-36-51
		1-Way	8-12-25	10-16-33	13-21-39	16-25-43	18-29-46	22-33-49	25-37-53	29-42-60
	Noise Criteria		—	19	24	28	32	36	40	47
16 x 16	Total Pressure		.023	.041	.064	.092	.125	.163	.207	.311
	Flow Rate, CFM		530	710	890	1065	1245	1420	1600	1955
	Throw	4-Way	4-7-14	5-9-18	7-10-20	9-13-24	10-16-26	10-19-28	13-21-29	15-24-33
		3-Way	4-7-17	6-10-21	8-12-24	10-15-28	11-20-30	13-22-32	17-24-34	19-27-39
		2-Way	7-10-23	10-14-29	11-17-34	15-22-36	18-28-43	20-30-44	24-34-50	27-39-57
		1-Way	8-12-26	11-17-33	14-21-40	18-25-45	21-32-50	23-38-53	29-40-56	33-46-64
	Noise Criteria		—	20	25	29	33	37	41	49
18 x 18	Total Pressure		.024	.042	.067	.095	.129	.170	.215	.322
	Flow Rate, CFM		675	900	1125	1350	1575	1800	2025	2475
	Throw	4-Way	5-7-15	6-10-21	8-12-25	10-15-27	12-18-30	13-21-32	15-24-33	17-27-38
		3-Way	5-8-17	7-11-24	9-14-29	11-17-32	13-22-34	15-24-36	17-27-39	19-31-44
		2-Way	8-12-26	11-16-34	13-21-40	16-26-44	20-30-47	23-34-50	26-38-54	29-43-62
		1-Way	9-14-29	12-20-39	16-25-47	20-29-52	23-34-56	26-39-60	29-44-64	33-50-73
	Noise Criteria		15	22	27	31	35	39	43	51

Performance Notes:

1. All pressures are in inches w.g..
2. Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
3. Noise Criteria (NC) values are based upon 10 dB room absorption, re 10^{-12} watts. Dash (—) in space indicates an Noise Criteria of less than 15.
4. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

Balancing:

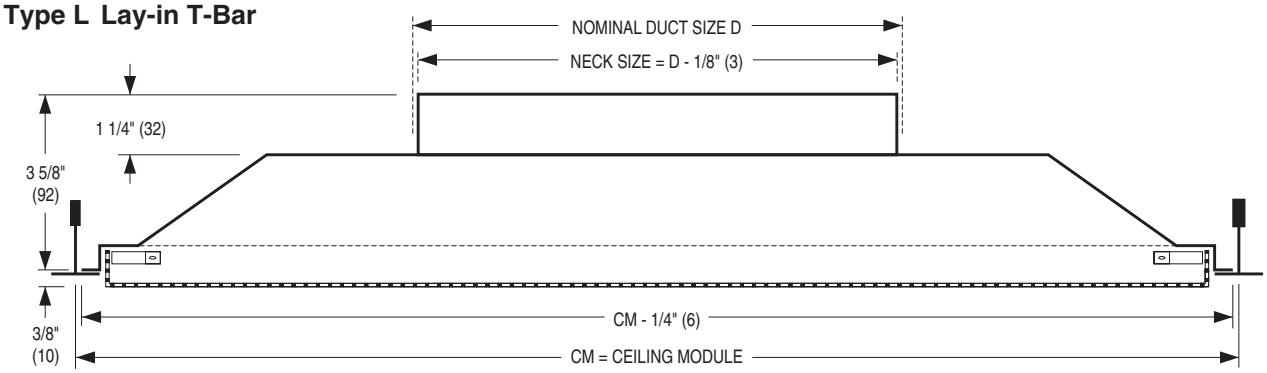
It is recommended that a commercially available 'Flow Hood' is used for field balancing. The airflow meter directly reads average flow rate with great accuracy at all volumes. It is a much faster and more accurate alternative to time consuming multiple velocity readings, eliminating the use of Ak factors and the calculations required to convert the average velocity into airflow.

DIMENSIONAL DATA AND FRAME TYPES:

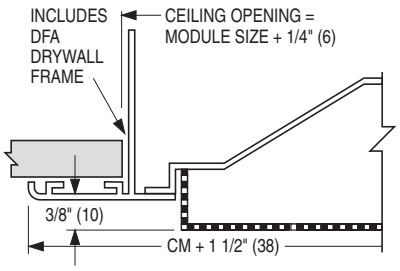
Models 4365, 4365A, 4365AA • Return • Drop Face • Round, Square or Rectangular Neck

All round ducts and square ducts when duct size is less than CM – 2" (51).

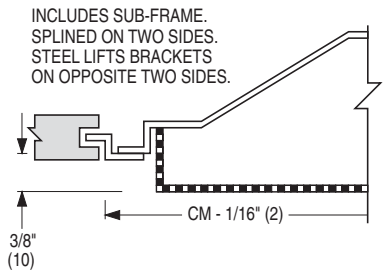
Type L Lay-in T-Bar



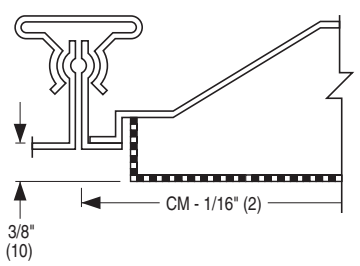
Type S Surface Mount



Type SP Spline



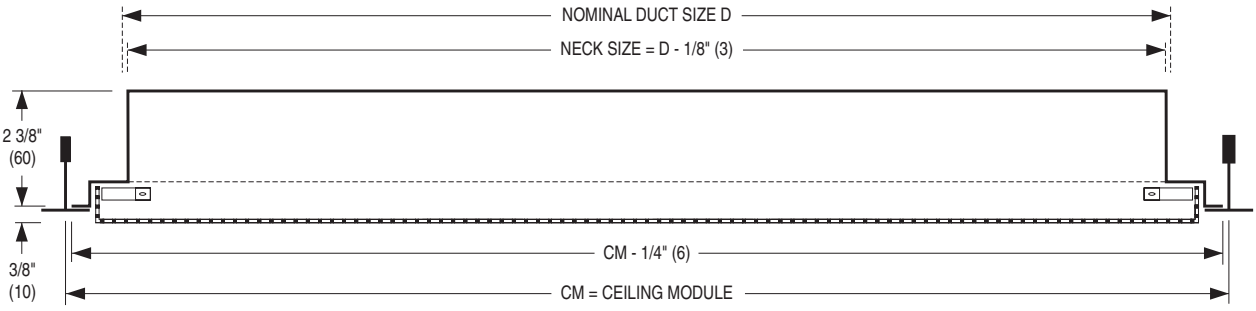
Type M Metal Pan (Snap-in)



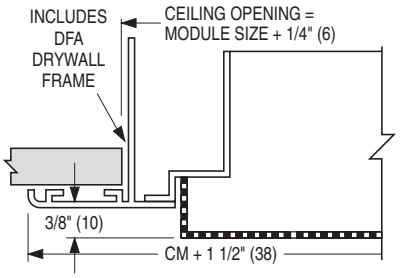
Models 4365, 4365A, 4365AA • Return • Drop Face

When duct size is = CM – 2" (51).

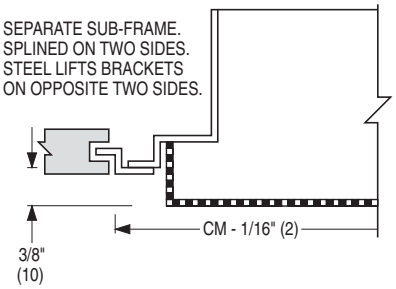
Type L Lay-in T-Bar



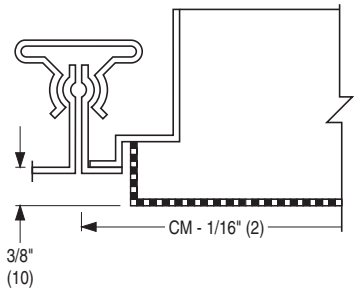
Type S Surface Mount



Type SP Spline



Type M Metal Pan (Snap-in)



PERFORMANCE DATA:

Models 4360, 4360A, 4360AA • Flush Face • Return Module
4365, 4365A, 4365AA • Drop Face • Return Module

Ceiling Module	Neck Size	Neck Velocity, FPM	300	400	500	600	700	800	1000	1200	1400
		Negative Static Pressure	.024	.042	.067	.096	.130	.170	.266	.383	.522
		Velocity Pressure	.006	.010	.016	.022	.031	.040	.062	.090	.122
12 x 12	6" Dia.	Airflow, CFM	59	78	98	118	137	157	196	236	275
		Noise Criteria	—	—	—	10	14	18	27	32	38
	8 x 8	Airflow, CFM	75	100	125	150	175	200	250	300	350
		Noise Criteria	—	—	—	12	17	21	30	35	41
	8" Dia.	Airflow, CFM	105	140	175	209	244	279	349	419	489
		Noise Criteria	—	—	10	16	21	25	32	39	44
	8 x 8	Airflow, CFM	133	178	222	267	311	356	444	533	622
		Noise Criteria	—	—	11	17	22	26	33	40	45
	10 x 10	Airflow, CFM	208	278	347	416	486	556	694	833	972
		Noise Criteria	—	—	18	24	29	33	40	47	52
20 x 20	18 x 18	Airflow, CFM	675	900	1125	1350	1575	1800	2250	2700	3150
		Noise Criteria	—	17	24	30	35	39	46	53	58
24 x 12	6" Dia.	Airflow, CFM	75	100	125	150	175	200	250	300	350
		Noise Criteria	—	—	—	13	18	22	29	36	41
	8" Dia.	Airflow, CFM	105	140	175	209	244	279	349	419	489
		Noise Criteria	—	—	—	15	20	24	31	38	43
	8 x 8	Airflow, CFM	133	178	222	267	311	356	444	533	622
		Noise Criteria	—	—	10	16	21	25	32	39	44
	18 x 6	Airflow, CFM	225	300	375	450	525	600	750	900	1050
		Noise Criteria	—	—	14	20	25	28	35	42	47
	22 x 10	Airflow, CFM	458	611	764	917	1069	1222	1528	1833	2139
		Noise Criteria	—	15	21	27	34	37	44	51	56
24 x 24	6" Dia.	Airflow, CFM	59	79	98	118	137	157	196	236	275
		Noise Criteria	—	—	—	10	15	19	26	33	38
	6 x 6	Airflow, CFM	75	100	125	150	175	200	250	300	350
		Noise Criteria	—	—	—	12	17	21	28	35	41
	8" Dia.	Airflow, CFM	105	140	175	209	244	279	349	419	489
		Noise Criteria	—	—	—	14	19	23	30	37	42
	8 x 8	Airflow, CFM	133	178	222	267	311	356	444	533	622
		Noise Criteria	—	—	—	15	20	24	31	38	43
	10" Dia.	Airflow, CFM	164	218	273	327	382	436	545	655	764
		Noise Criteria	—	—	10	16	21	25	32	39	44
	10 x 10	Airflow, CFM	208	278	347	417	486	556	694	833	972
		Noise Criteria	—	—	11	17	22	26	33	40	45
	12" Dia.	Airflow, CFM	236	314	393	471	550	628	785	942	1100
		Noise Criteria	—	—	13	19	24	28	35	42	47
	12 x 12	Airflow, CFM	300	400	500	600	700	800	1000	1200	1400
		Noise Criteria	—	—	14	20	25	29	36	43	48
	14" Dia.	Airflow, CFM	321	428	535	641	748	855	1069	1283	1497
		Noise Criteria	—	—	15	21	26	30	37	44	49
	14 x 14	Airflow, CFM	408	544	681	817	953	1089	1361	1633	1906
		Noise Criteria	—	10	17	23	28	32	39	46	51
	15 x 15	Airflow, CFM	469	625	781	938	1094	1250	1563	1875	2188
		Noise Criteria	—	12	19	25	30	34	41	48	53
	16" Dia.	Airflow, CFM	419	559	698	838	977	1117	1396	1676	1955
		Noise Criteria	—	10	17	23	28	32	39	46	51
	18" Dia.	Airflow, CFM	530	707	884	1060	1237	1414	1767	2121	2474
		Noise Criteria	—	12	19	25	30	32	39	46	51
	18 x 18	Airflow, CFM	675	900	1125	1350	1575	1800	2250	2700	3150
		Noise Criteria	—	16	23	29	34	38	45	52	57
	22 x 22	Airflow, CFM	1008	1344	1681	2017	2353	2689	3361	4033	4706
		Noise Criteria	—	18	25	31	36	40	47	51	59
48 x 24	46 x 22	Airflow, CFM	2108	2811	3514	4217	4919	5622	7028	8433	9839
		Noise Criteria	11	20	27	34	38	43	50	57	62

Performance Notes:

1. All pressures are in inches w.g..
2. Noise Criteria (NC) values are based upon 10 dB room absorption, re 10^{-12} watts. Dash (—) in space indicates an Noise Criteria of less than 10.
3. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.